

Appln. Serial No. 10/590,435
Response March 15, 2010

- 2 -

RECEIVED
CENTRAL FAX CENTER

MAR 15 2010

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An antifibrillogenic agent for inhibiting amyloidosis and/or for cytoprotection comprising a-peptide consisting essentially of ANX (SEQ. ID. NO. 28), wherein X is any amino acid except cysteine, or an isomer thereof, a retro or a retro-inverso isomer thereof, or a salt thereof.
2. (Previously Presented) The antifibrillogenic agent of claim 1, wherein X is I or F.
3. (Currently Amended) The antifibrillogenic agent of claim 1, wherein the agent comprises a peptide consisting essentially of ANF (SEQ. ID. NO. 24), or an isomer thereof, a retro or a retro-inverso isomer thereof, or a salt thereof.
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Previously presented) The antifibrillogenic agent of claim 1, wherein said peptide is ANX (SEQ. ID. NO. 28) wherein X is any amino acid except cysteine.
10. (Previously presented) The antifibrillogenic agent of claim 9, wherein X is I or F.
11. (Previously presented) The antifibrillogenic agent of claim 10, wherein the peptide is ANF (SEQ. ID. NO. 24).
12. (Canceled)
13. (Previously presented) The antifibrillogenic agent of claim 1, wherein said amyloidosis is IAPP-related.
14. (Previously presented) The antifibrillogenic agent of claim 1, wherein said amyloidosis is type 1 or type 2 diabetes.

*Appn. Serial No. 10/590,435
Response March 15, 2010*

- 3 -

15. (Previously presented) A composition for inhibiting amyloidosis and/or for cytoprotection, comprising a therapeutically-effective amount of the antifibrillogenic agent of claim 1 in association with a pharmaceutically-acceptable carrier.
16. (Previously presented) A composition for inhibiting amyloidosis and/or for cytoprotection, comprising a therapeutically-effective amount of the antifibrillogenic agent of claim 9 in association with a pharmaceutically-acceptable carrier.
17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Canceled)
21. (Canceled)
22. (Canceled)
23. (Canceled)
24. (Canceled)
25. (Canceled)
26. (Canceled)
27. (Canceled)
28. (Canceled)
29. (Canceled)
30. (Canceled)
31. (Canceled)
32. (Withdrawn) A method for the treatment of amyloidosis disorders in a patient, comprising administering to said patient a therapeutically-effective amount of the antifibrillogenic agent of claim 1.
33. (Withdrawn) The method of claim 32, wherein said amyloidosis disorder is IAPP-related.
34. (Withdrawn) The method of claim 33, wherein said amyloidosis disorder is type 1 or type 2 diabetes.
35. (Withdrawn) The method of claim 34, wherein said antifibrillogenic agent is administered in conjunction with another agent selected from the group consisting of insulin, sulfonylurea, and glucose sensitizers.

DOCS #J125447 v. 1

*Appn. Serial No. 10/590,435
Response March 15, 2010*

- 4 -

36. (Canceled)
37. (Canceled)
38. (Canceled)
39. (Canceled)
40. (Withdrawn) A process for the preparation of cells suitable for transplantation into a mammal, which cells are capable of forming amyloid deposits, said process comprising contacting cells *in vitro* with the antifibrillogenic agent of claim 1 for inhibiting amyloid deposit formation.
41. (Withdrawn) The process of claim 40, wherein said antifibrillogenic agent causes breakdown of amyloid deposits, the deposits having been formed by said cells prior to said contact.
42. (Withdrawn) The process of claim 40, wherein said cells are cultured in the presence of said antifibrillogenic agent.
43. (Withdrawn) The process of claim 40, wherein said amyloid deposits comprise IAPP amyloid.
44. (Withdrawn) The process of claim 40, wherein said amyloid deposits are associated with type 1 or type 2 diabetes.
45. (Withdrawn) The process of claim 40, wherein said cells, prior to treatment, form amyloid deposits.
46. (Withdrawn) Cells suitable for transplantation into a mammal, which have been prepared by the process of claim 40.
47. (Withdrawn) A method for treating a type 1 or type 2 diabetes patient after transplantation, said method comprising the step of administering *in vivo* to said patient the antifibrillogenic agent of claim 1 for inhibiting, preventing, and/or reducing amyloid deposit formation and amyloidosis.
48. (Withdrawn) The method of claim 47, wherein said amyloid deposit formation and/or amyloidosis is IAPP-related.
49. (Withdrawn) The method of claim 47, wherein said composition is administered in conjunction with another agent selected from the group consisting of insulin, sulfonylurea, and glucose sensitizers.

Appln. Serial No. 10/590,435

Response March 15, 2010

- 5 -

50. (Withdrawn – currently amended) A method for inhibiting amyloidosis and/or for cytoprotection, comprising administering to a subject a therapeutically-effective amount of the antifibrillogenic agent of any one of claims 1 to 7, wherein said antifibrillogenic agent prevents or reduces amyloid deposition.
51. (Canceled)
52. (Canceled)
53. (Canceled)
54. (Canceled)
55. (Canceled)
56. (Canceled)
57. (Withdrawn) A method for identifying an optimized peptide for inhibition of amyloidosis, comprising the steps of:
 - (a) choosing an original peptide selected from the group consisting of ANF (SEQ. ID. NO. 24), GNF (SEQ. ID. NO. 25), AGF (SEQ. ID. NO. 26), and NFL (SEQ. ID. NO. 33),
 - (b) systematically substituting at each residue a different amino acid,
 - (c) testing the ability of each derivative to inhibit amyloid fibril formation, and
 - (d) comparing the inhibition of each derivative with the inhibition of the original peptide, wherein an increase in inhibition of the derivative as compared with the original peptide indicates an optimized peptide.
58. (Withdrawn) The method of claim 57, wherein the different amino acid is chosen from the group consisting of Gly, Ala, Val, Leu, Ile, Ser, Thr, Met, Asp, Asn, Glu, Gln, Arg, Lys, His, Phe, Tyr, Trp, and Pro.
59. (Withdrawn) The method of claim 57, wherein the original peptide is ANF (SEQ. ID. NO. 24).
60. (Withdrawn) The method of claim 57, wherein the testing for inhibition comprises at least one *in vitro* assay system selected from the group consisting of CD, EM, and cell toxicity.
61. (Withdrawn) The optimized peptide identified using the method of claim 57.
62. (New) A composition for inhibiting amyloidosis and/or for cytoprotection, comprising a therapeutically-effective amount of the antifibrillogenic agent of claim 10 to a salt thereof in association with a pharmaceutically-acceptable carrier.

DOCS #1125447 v. 1

*Appn. Serial No. 10/590,435
Response March 15, 2010*

- 6 -

63. (New) A composition for inhibiting amyloidosis and/or for cytoprotection, comprising a therapeutically-effective amount of the antifibrillogenic agent of claim 11 or a salt thereof in association with a pharmaceutically-acceptable carrier.